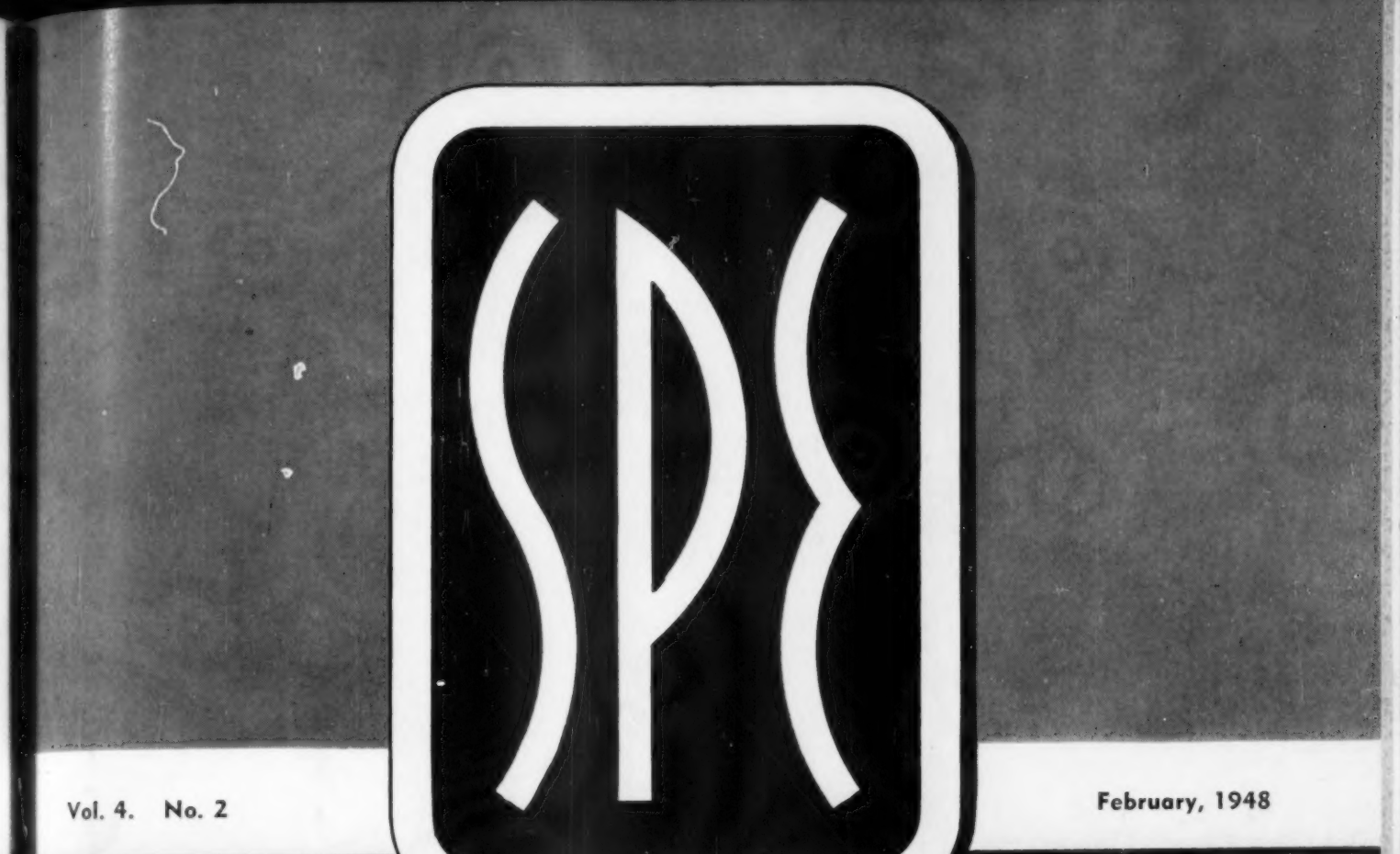

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February, 1948

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SPE NEWS

Issued Monthly to all Members of the Society of Plastics Engineers

Vol. 4 No. 2 February, 1948

COLOR STANDARDIZATION

By DOROTHY DOLTON
Interchemical Corporation

Presented at the 1948 SPE National Conference

Dorothy Dolton

With the advance in methods of production from slow handmade, to rapid machine-made products, the problem of color control has taken on increasing importance. In the surface coatings industries the problem of maintaining a constant color is extremely necessary, particularly when a final product is assembled in parts, as in the case of automobiles. Very accurate color control is required in order that the fenders, the hood, the doors, etc., are all the same color, so that the final automobile is not an array of tints and shades. Another industry, also vitally concerned with color control, is the textile industry, where again, the final product is an assembly of parts, such as a woman's dress. The sleeves, the blouse, and the skirt are all cut separately and very often from different bolts of cloth. If each bolt were not a tolerable match, dresses looking like Joseph's coat of many colors would result. It would not be difficult to cite many more examples of this type, nor would it be difficult to cite examples where, while color control is very necessary, it is not as exacting. The case of box cartons is an example of color control that allows for slightly greater tolerance. While it is imperative that color standardization in packaging be precise, in order that a motley array of boxes of one product does not appear on the grocer's shelf and suggest to the consumer inferior material inside, a greater variation than in the case of the dresses may be tolerated.

Thus, two problems are presented. The first is that of maintaining the color of a product during production so that it is a reasonable match for the standard as first agreed upon with the customer, and the second is that of setting up tolerances so that it can be decided to what degree of exactness the production runs must be maintained.

Because of the ever increasing demands for production perfection. it is generally accepted today that spectrophotometry is the most precise and reliable method for handling both problems.

In order that the advantages of the application of spectrophotometry to these problems may be fully appreciated, it is necessary to consider the subject in some detail.

The physical reason for considering some objects as colored and others as not, is the manner in which the object reflects or transmits light. For example, a certain object is considered red because, when white light or illuminant light, which is composed of all the colors of the spectrum, is shining on it, it is either coated with or composed of a chemical of such a nature that the violet, blue, green and yellow colors (the short and middle wavelengths) of the spectrum are absorbed by the chemical and the orange and red colors (the long wavelengths) are reflected back to the eye. Hence, since only the long wavelengths are received by the eye, the color appears red. On the other hand, a certain object appears blue, because its chemical nature is such that it absorbs the long wavelengths, yellow and red, and reflects back to the eye only the short or blue and violet wavelengths. This phenomenon of colorants is called selective absorbtion.

A spectrophotometer, such as the General Electric recording spectrophotometer is an instrument designed to measure quantitatively the selective absorption of a material. In other words, it is an instrument designed to measure the

(Continued on Page 11)

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NATIONAL MEETING NEWS AND NOTES

Technical Papers Featured at 4th Nat'l Conference in Detroit

By BESS DAY

Detroit's Mayor Gene Van Antwerp officially opened the Fourth National Conference of the SPE, at the Rackham Building, January 21, 1948. His welcome opened a three-day show which featured the presentation of 17 technical papers by well-known authorities in the plastics field.

T. E. Orr, Retiring President, Introduces Detroit Mayor, Van Antwerp

Papers ranged from the use of plastics in the automotive field, uses for nylon, and the description of such specific new materials as the Mycalex-410 glass bonded mica in molded form, to talks on preheating and press design, and purely chemical topics. A program, in short, which interested everyone from the originating chemist to the end-user.

Booths of participating companies were set up in the Banquet Hall of the Rackham Building for informal conferences between company men and interested, potential customers. The public was excluded from the show, giving the companies full time to devote to the business of making contacts. A list of these companies who supported the SPE Conference is given at the end of this article.

From the registration figures, almost a seventh of the SPE membership attended; one member out of seven. We think that is pretty good, and an unusually high average for a national organization.

1948 National Officers

R. B. Bishop, R. G. Dailey, J. H. DuBois, M. J. Petretti

New National officers e'ected by the National Council were J. H. DuBois, president; Mario Petretti, vice-president; R. G. Dailey, secretary; and R. B. Bishop, treasurer. DuBois is executive engineer of the Shaw Insulator Co. of Irvington, N. J., and the author of several books in the plastics field. He served as vice-president in 1947. Mario Petretti, on the National Council last year, is with Noma Electric Co., of Holyoke, Mass. He was president of the Western New England Section of the SPE last year. R. G. Dai'ey, Standard Products Co., of Detroit, was elected a national director in 1947. He was active in the founding of the Detroit Section. R. B. Bishop of the Philadelphia Section is with the Socony-Vacuum Oil Co. as a research engineer. He served in 1946 as the President of the Philadelphia section.

The papers presented at the Conference will not be published as a unit, but the most important ones will be published as a regular feature of the

(Continued on Page 18)

THREE LETTERS ARE MISSING FROM THE ALPHABET !

By J. O. REINECKE, Chicago Member
Barnes and Reinecke

The first astounding discovery was made during the Cocktail Hour at a SPE Meeting. One of the hors d'oeuvres, no doubt, caused me to hiccup just as I was explaining why I took six putts on the tenth hole at the SPE Golf Meet. A sound unlike any previously heard, and shaped like a pretzel with one loop wavy, was the result. Immediately I knew it belonged between the "G" and "H." Too many of our words using a "gh" hadn't made sense previously. (If you don't believe me, what about gherkin, or ghoul, or ghastly, or ghizite?)

Reinecke and Mister Gib

The two other missing letters were discovered soon afterward. Unfortunately, they cannot be explained or described without using the letters themselves. You will just have to take my word for it that they belong either between "P" and "Q" or "W" and "X." I think.

The reason these astounding discoveries were not made earlier is that we have learned to talk without using half the letters now available. We speak a shorthand of "Chagot f'supper?," "Hiya, Ed," "Whoja like at H'leah in da fit?"

Another of our diabolical habits is the use of abbreviations—Dr., app., lb. (who in the hell ever thought that one up!) f.o.b., oz., etc. They even use them in textbooks.

In fact, I began to suspect our language when helping my daughter* with her fourth grade geography. I couldn't understand half of it, and the arithmetic is even worse.

I knew it for certain at our first SPE Technical Meeting. I didn't understand anything they were talking about.

The same is true with most other books and magazines. No doubt others have the same trouble or Readers' Digest and the other magazines which condense the subject matter and leave out the hard words wouldn't be so popular.

I don't think other languages are any better than ours, either. I have never been able to understand what a foreigner is saying and I wonder if they know. When two of them are talking it usually appears that they are arguing — probably about what the other said wrongly.

Concrete proof is in the way they write. I spent a dismal three hours in a molder's waiting room not long ago looking at a copy of "Die Plasticwerkindustrie und Sauerbraten," and it was full of such idiotically scrambled sentences as "Tenite's die nacht, Gretchen!" Is it any wonder we have such difficulty expressing ourselves?

I have spent considerable time trying to write a short story which does not require the use of any of the THREE LETTERS. The best one I've written goes "Peter Piper picked a peck of pickled peppers, etc.," but I don't think it will ever be very popular. The love plot is too thin.

Our books aren't much better. I have collected a list of some words which may be just printers' errors but at least some money-hungry, capitalistic publisher was trying to foist them off on a gullible public. I mean words like "phantasmatography," "szopelka," zygodostyl," "opphorosalpigectomy," or "qued."

The SPE News is guilty too. Did you see some of the words used in Gustave Holmgren's article in the June, 1946, issue?

It is just such trickery as this which has resulted in plastics** not getting anywhere.

Designers and engineers aren't the dopes you think they are. They know there are no such words as methyl methacrylate, polyvinylidene chloride, or polytetrafluoroethylene. They know it's really "Bakelite," and "Bakelite" is what goes on the print for specifications—damn it!

One person calls it "Geon," and another "Plioflex." And some self-styled "plastics expert" tells

*What a spelling! My older brother uses the simplified version "She girl. Me Hugo."

Dear Editor:

When you asked me to contribute to this Issue of the News you said I should choose any subject and furnish a picture of myself.

The only picture I could find is taken with a friend of mine, named Mister Gib, with whom I spent the summer in the Rockies.

I must point out that he had nothing to do with the article and I don't know that he even concurs with my ideas. Usually he doesn't.

However, his differences of opinion are mostly expressed by passive resistance or non-cooperation. It is my hope that those who think as I do, will not hesitate to take some action, and not ignore every suggestion which requires effort, as Mister Gib would do. He can be very exasperating at times.

I address you not as a great designer, not as a plastics authority, but as the discoverer of a disastrous literary deficiency.

**Why do all plastics names end in "ite?" If plastics were naming people they wouldn't confuse themselves so.

(Continued on Page 19)

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SOUTH TEXAS SECTION

Meeting at the Ben Milam Hotel, Houston, Texas, on Wednesday evening, January 7th, 1948, the Houston Plastics Society formed the South Texas Section of the Society of Plastics Engineers, Inc.

The officers of the South Texas Section are as follows:

Commander Dan Bloxom, President, Southwestern Plastics, Inc., Houston, Texas.

Marion Arthur, Secretary, Humble Oil and Refining Company, Houston, Texas.

The directors of the South Texas Section are as follows:

W. L. Clarke, The P. D. Browne Co., Houston, Texas.

J. S. Finger, The Macrolyn Corp., Houston, Texas.

Perry Warmath, The Warmath Mfg., Co., Houston, Texas.

The meeting was attended by a large group of interested engineers and executives. The group heard a technical paper presented by Mr. Lou Barnett, President of Loma Plastics, Inc., of Fort Worth, Texas, and by Thomas E. Orr, National President of SPE.

MIAMI VALLEY SEES PLANT

New Officers and Directors are Announced; Committees Appointed

BY J. G. BRADEN

The Kurz-Kasch, Inc., custom molders of thermosetting plastics, and one of the best known firms in the molding field, were host to the members of Miami Valley Section on January 8. Dinner was served at Sacksteder's Inn, after which H. J. (Bud) Kasch, Jr., Program Chairman for the evening, and Roy Dean, General Manager of Kurz-Kasch, extended a hearty welcome to all of the members to inspect thoroughly their plant facilities. Guides were provided for the tour and some of the newer methods of molding were shown. President B. C. Stupp announced the results of the balloting for Directors. The three chosen were Walter E. Oelman, Frank E. Schneider and John L. Russell.

At a Board of Directors meeting in the Engineers Club on Monday, January 12, officers for 1948 were elected. They are G. J. Wilson, President; J. G. Braden, Vice-President; J. E. Baxter, Second Vice-President; J. L. Russell, Secretary; F. E. Schneider, Treasurer.

A program committee has already begun to function. Named by our new President, G. J. Wilson, to this group are: W. E. Oelman, Chairman; R. G. Gerdes, Vice-chairman; D. E. Lucid, C. M. Jensen, J. G. Braden and C. H. Kruger. They will present their tentative plans for a 1948 program of meetings for the consideration and approval of the members at the February 5th meeting at the Plastic Moldings, Inc., Cincinnati, O. This will also be a plant tour with J. E. Baxter as chairman and R. G. Gerdes, Sales-Manager of Plastic Moldings, Inc., as assistant. Refreshments will be served at the close of the meeting.

MEXICO CITY GROUP JOINS SPE

Founders of the Mexico City Section at Organization Meeting.

Standing, left to right: Mr. Otto Groebecker, Mr. Jorge Noe Martinez, Mr. Manuel Martin del Campo, Mr. Jorge Lopez, Mr. Enrique Uhthoff, Mr. German Mueller, Mr. J. H. Daniell, Mr. Salomon Soloveichick, Mr. W. B. May. Sitting, left to right: Mr. Roberto Gonzalez, Mr. Rafael Quijano R., Mr. Thomas E. Orr, Mr. J. H. Field, Dr. Jose Polak, Mr. Rodrigo Ampudia V., Mr. Enrique del Valle, Mr. Firmin Fulda, Jr.

Twenty executives and engineers of the Mexican Plastics Industry met at the Chapultepec Restaurant on Monday evening, January 12th, 1947, and organized the Mexican Section of the Society of Plastics Engineers, Inc.

This distinguished group unanimously expressed their opinion that the rapid growth of plastics in the great Republic of Mexico warranted the formation of a section of the Society of Plastics Engineers in Mexico City for the discussion of mutual problems, for interchange of ideas and for mutual advancement.

The meeting was called to order informally by Senor John H. Field, Jr., who in turn called on Doctor Jose Polak, Eminent Consulting Plastics and Chemical Engineer. After expressing the viewpoint of the group, Doctor Polak called on the National President of SPE, Mr. Thomas E. Orr. After exchange of toasts, Mr. Orr explained the aims and purposes of SPE. Mr. Orr also explained that SPE had developed a new theory of service in the formation of international sections. All Initiation Fees and Dues are retained by the Mexican Section, and publication costs only are remitted to the central Society. Similar to all sections of SPE, the International Sections are locally self-governing being controlled by a locally elected Board of Directors.

After full discussion of viewpoints and problems, the group elected the following officers for 1948:

President, Rodrigo Ampudia del Valle, Plastices Nationales S. A.; Vice-President, J. Harris Daniell, Goodrich Euzkadi; Treasurer, John H. Field, Jr., Gerente of Plastics, Plastipos, S. A.; Secretary, Rafael Quijano, Edificio International, Paseo Reforma No. 1, Mexico, D. F.

GOLDEN GATE EVENTS

BY ROY F. ELKE

A dinner meeting of the Golden Gate Chapter of the SPE was held at the New Tivoli Restaurant, San Francisco, on January 20th. Dr. Marie Bentevogilo, Technical Director of the Celanese Corporation, presented a very interesting and thought provoking talk on the recent developments in cellulosics. Mr. Ernie Smyth of Rohm & Haas, followed up with an excellent movie dealing with the latest applications and fabrication of Plexiglas.

The warm friendliness that prevailed among the 58 members and guests present will surely inspire the members of this Chapter to greater effort in expanding the activities of the SPE.

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TOLEDO SECTION HEARS DR. LIVINGSTON ON LADIES' NIGHT PROGRAM

BY A. E. GIESLER

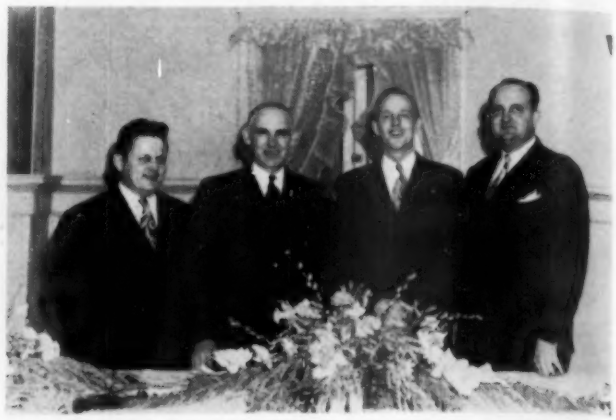
The second annual Ladies' Night banquet of the Toledo Section was held January 26th at the Toledo Woman's Club Building. This annual party has proven to be the biggest affair of the winter season.

A. E. Giesler

Dr. L. F. Livingston of duPont directed his well illustrated lecture to the ladies of the group. His remarks on the new Nylon group of materials and display of fabrics brought forth an avalanche of questions from the ladies.

After the dinner and lecture, door prizes were drawn which included a radio, mirrors, perfumizers and a great number of desirable plastic prizes. Each lady received a brush and comb set as table favors and the men received flashlights.

NEW TOLEDO OFFICERS



The new officers for the 1948 term were introduced as follows: President, Earl M. Fisher, Textileather Corp.; Vice-President, Arthur E. Giesler, The Electric Auto-Lite Co.; Secretary, Paul Mattimoe, Libbey-Owens-Ford Glass Co.; Treasurer, Richard Serrick, Toledo Plastics Co.

The board of directors for the 1948 term are as listed: Mr. Paul Mattimoe, Mr. Andrew Kassay, Mr. Victor Hofmann, Mr. Richard Serrick, Mr. Purcell DeHan, Mr. E. A. Fluevog, Mr. Earl Fisher, Mr. Harry Hatch, and Mr. A. E. Giesler

SOUTH CALIFORNIA OFFICERS

By Erven White

All section members had been invited to attend the meeting held Thursday, January 8, at 8 p. m. at the Hollywood Roosevelt Hotel, in order to conduct an election of directors for 1948. Twelve members out of a possible twenty-two were in attendance.

After President Goldsworthy called the meeting to order, he presented a brief history of what had transpired in the various directors' meetings held in the last several months. He asked for a short discussion from the floor concerning future policy.

Mr. Thompson suggested it might be well for S. P. E. to hold a joint technical meeting with S. P. I. during the third week of February rather than wait for a speaker of national renown for an initial meeting.

Mr. Carmein suggested that our initial meeting program consist of several short papers on technical subjects prepared by local people. Mr. Forster and Mr. Prince also supported this suggestion. Mr. Beauchamp suggested that we continue with the plan to have a nationally recognized speaker for our initial meeting but suggested a definite time limit on scheduling this meeting.

Mr. Beauchamp then moved that our first meeting should be sponsored solely by S. P. E. and that a national speaker should be obtained if possible. However, in order to have the meeting held prior to March 1, local talent could be utilized if no national speaker was available. Mr. Spencer seconded the motion. Voting resulted in a tie, and the motion was withdrawn.

Mr. Kaumeyer suggested that this was a problem for the new board of directors and moved that we go ahead with election of the directors. The motion was seconded by White and carried unanimously.

The election was conducted through the use of secret ballots, wherein each member voted for six of the old directors and three who had not served previously.

The three old directors receiving the greatest number of votes were elected to serve two additional terms and the next three to serve one additional term. Mr. Goldsworthy, Mr. Bordner and Mr. Thompson were elected for two terms. Mr. Kaumeyer, Mr. Beauchamp and Mr. White were elected for one term. The new directors who are to serve three terms are Mr. John Delmonte, Mr. Robert Forster, Jr., and Warren V. Prince.

After a short recess these new directors then reconvened to conduct an election of officers. The following new directors were present:

Mr. Goldsworthy, Mr. Thompson, Mr. Forster, Mr. White, Mr. Beauchamp, Mr. Kaumeyer, Mr. Prince

The following officers were elected:

President, Mr. Goldsworthy; vice-president, Mr. Thompson; secretary, Mr. Prince; treasurer, Mr. Beauchamp.

Mr. White then moved that Mr. Goldsworthy should appoint a committee composed of himself and two others to decide on the program and date for the initial public meeting. The motion was seconded and carried unanimously. Mr. Goldsworthy appointed Mr. Thompson and Mr. White to serve with him on this committee.

A HISTORY of the CHICAGO SECTION

BY VAL WRIGHT
Midwest Editor of "Modern Plastics"; Member Chicago SPE

Why not form a Chicago Section of the Society of Plastics Engineers?

The merits of such a move formed the basis of an interested discussion by a group of Chicago plastics industry members during a Detroit trip in September, 1942. Included in the group were John Bachner, Chicago Molded Products Corporation; Robert Morehouse, Hoosier Cardinal Corp.; William Cullom, Celanese Plastics Corporation; Charles Henry, Chicago Die Mold Corp.; Win Cooper, Bakelite Corporation; Lee Bordner, Chicago Molded Products Corporation, and Jean Reinecke, Barnes & Reinecke, Inc.

These men reasoned that the time was propitious for formation of a Chicago Section. With the nation at war, the plastics industry was striving to adjust itself to material dislocations, a switch to wartime production, and many related problems. Never had there been a more urgent need for the utmost in cooperation and understanding among raw material suppliers, equipment manufacturers, molders, fabricators and other industry factors.

This preliminary discussion was not long in bearing fruit. Soon after the group had returned to Chicago, preliminary arrangements were completed with the SPE parent organization in Detroit and an organization meeting luncheon was held in a restaurant on Chicago's west side. Among those on hand for this meeting were Mr. Bachner, Mr. Henry, Mr. Cooper. Mr. Reinecke, W. M. Ellison, Richardson Co.; Bill Nelson, Sinko Tool & Mfg. Co., and J. M. Connors, western manager, Modern Plastics.

Robert Morehouse was elected first president of the Chicago section, with John Bachner as vice president, Jean Reinecke as second vice president and Bill Cullom as secretary-treasurer. William L. Hess, at that time with Sandee Mfg. Co., assumed leadership of the group's technical activities.

On October 2, 1942, the new chapter held its first meeting at the Merchandise Mart. This meeting was attended by approximately a dozen SPE members, plus other industry men interested in the activities of the new organization. By the time the next meeting took place, the group had taken in five new members and nine new applications had been received. Subsequent meetings witnessed a continued healthy growth in membership.

So rapid was the expansion of the section that within six months it was found desirable to switch the monthly meetings to the large main dining room of the Merchants' and Manufacturers' Club in the Mart. At the end of its second year, the section had developed a well-defined program and showed a treasury balance of approximately $1,500.

At the fourth meeting of the group, the policy of guest speakers was inaugurated when Jack Caleb of Automatic Electric addressed the section, telling the SPE members about the founding of the Steel Research Society some 20 years earlier, and its growth to a membership of approximately 12,000 members.

The first board of directors of the Chicago section was comprised of John Bachner, Win Cooper, Jean Reinecke, Charles Henry and Bill Nelson. Earliest members of the section to serve on the SPE national board of directors were John Bachner, Charles Henry and Bob Morehouse.

Although the Chicago section has come a long way since its inception, the same friendly spirit and determination to do a better job for the industry still prevail at the monthly meetings. Meetings are now held the first Tuesday of each month at the Merchants' and Manufacturers' Club, and it is the usual practice to have one or more guest speakers who discuss some technical or semi-technical subject of industry importance, such as new equipment, materials and techniques.

(Continued on Page 8)

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CHICAGO HISTORY

(Continued from Page 7)

Merchandising and other general industry problems also come in for their share of attention. Attendance at the meetings of the Chicago section usually ranges between 75 and 150 members and guests.

The largest meeting ever staged by the Chicago section took place in February, 1943. This was a double-feature affair at which James Connors gave the section a prevue showing of the new Modern Plastics sound color film, "This Plastic Age." The turnout of several hundred for this meeting filled one of the main rooms of the club to overflowing. Showing of the film was followed by a banquet at which William B. Hoey explained the principles of jet molding.

Despite their intense interest in the technical side of the plastics industry, members of the Chicago section do not overlook the social angle. Each winter the section stages a special dinner meeting around the Holiday season to which the ladies are invited. The most recent of these meetings, held at the Edgewater Beach Hotel early in January, included dinner, dancing, and several acts of entertainment.

Another event to which Chicago section members look forward with pleasant anticipation is the annual summer golf outing at Elmhurst Country Club. At last summer's affair, about 85 members were on hand for golf and approximately 100 at the dinner. Jim Ferguson of Plaskon Division, Libby-Owens-Ford Glass Co., carried off top links honors and was presented the special acrylic trophy engraved with the names of previous winners.

As a member of the Chicago Technical Societies Council, the Chicago Section of SPE for the past three years has taken an active part in the annual Chicago Production Show, which was established during the wartime period as the Chicago War Production Show. Through the efforts of the Chicago section, panels of speakers have been lined up to bring the story of plastics in industry to the attention of these important annual conferences. For the 1948 show, which will be held in March, A. H. Voss of Western Electric Co. heads the committee arranging the panel of speakers. In these talks, which will be heard by many production men having no direct contact with the plastics field, an attempt will be made to give a clear picture of plastics' potential role in the production picture, without dwelling too much on technical aspects of interest only to plastics men. The Chicago section of SPE will also sponsor an exhibit of plastic products at the Production Show.

During its active five-year history, the Chicago section has been headed by the following men, who served as president in the order named: Bob Morehouse, Hoosier Cardinal Corp.; John Bachner, Chicago Molded Products Corporation; Win Cooper, Bakelite Corporation; L. H. Amrine, Imperial Molded Products Corp.; Jean Reinecke, Barnes & Reinecke, Inc.; and Ed Woodman, Durez Plastics & Chemicals, Inc.

Officers recently elected for the current year include William L. Hess, Anesite Co., president; Ray Bauspies, Midwest Molding & Mfg. Co., vice president, and Bob Stephens, Kurz-Kasch, Inc., secretary-treasurer. L. H. Amrine is the newly elected national director from the Chicago section.

Members of the current board of directors include there who have just taken office—William Wright, Service Plastics; Lee Swift, Sandee Mfg. Co., and Bob Stephens, Kurz-Kasch, Inc.—and Win Cooper and Charles Dassing of Bakelite Corp.; Clarence McCormick, Superior Plastics Co.; Jimmy Johnston, Chicago Molded Products Corp.; William Hess, Anesite Co., and Ray Bauspies, Midest Molding & Mfg. Co., all of whose terms carry over from the preceding year.

N. W. PENN. ELECTS OFFICERS JOINS ERIE ENGINEERING

By N. R. REYBURN

Northwest Pennsylvania Section of S. P. E. held its January meeting on January 12 at the Uthmann Chor. Eighteen members and guests were present.

The first order of business was the installation of new officers who were as follows: Directors: J. C. Stokes, W. R. Byrd, J. A. Loranger (for three-year term) and C. W. Kuffner (to fill out unexpired term of Kenneth Rouzer). National Directors: P. C. Roche. President for 1948: N. R. Reyburn; Vice-president: E. H. Roberts; Secretary, J. A. Loranger; Treasurer, P. C. Roche.

President Paul Roche discussed the annual technical conference and advised attendance of as many members as could be there as well as the taking of space for exhibition. Announcement was also made that the Northwest Pennsylvania Section had decided to join the Erie Engineering Society Council with Paul Roche as temporary representative. Mr. Roche thanked the retiring directors, officers, committee chairman and committeemen for their co-operation in building a bigger and better S. P. E. during 1947. He also announced a 56% membership increase for the year.

Following this, the speaker of the evening, Mr. F. J. Donahue of the Monsanto Chemical Company talked on properties of thermo setting plastic. His talk was a well organized and complete discussion of the raw material manufacturing, molding, and application of the phenolic molding compound.

Mr. Donahue's discussion on the effects of moisture in phenolic compounds was of particular interest in connection with the current method of preheating by steam versus high frequency.

Following his talk a very popular entertainment program was put on by the Choristers of the Uthmann Chor who presented a half dozen well chosen and excellently sung numbers for the entertainment of the Plastics group.

(Continued on Page 19)

THE PRESIDENT'S ANNUAL REPORT

The year 1947 has been a year of progress for your Society. During this period the Society has been a force continuously exerted for the greatest good in the field of plastics.

T. E. Orr

SPE belongs to these Local Sections and to the individual members and it tries to serve them well. It renders its services through the following means:

1. National Annual Technical Conferences—through outstanding technical papers the engineering progress in the field of plastics is presented annually. In 1947 at Chicago and in 1948 at Detroit these conferences have been of great value to our members.

2. SPE News is published monthly; it contains Technical Proceedings of the Annual Meetings; Technical Papers; Calendars; Section News and Personals.

3. SPE Prize Paper Contest stimulates original thought among engineers.

4. Guidance of the National Committees such as our Speakers Committees, Educational Committee, Credentials Committees, etc.

5. Participation in the Professional Activities Programs.

6. Issuance of Card Records, Membership Cards, Certificates, and National Reports.

SPE at the start of 1947 had 14 geographical sections in the central part of the United States. At present we have 30 sections from coast to coast including one section in Canada and one section in our sister republic of Mexico. In addition there are about four more Sections in process of formation.

In 1948, it may be necessary for SPE to expand into Western Europe. In these international sections a method has been found to render SPE service to our overseas members with no currency exchange except for publications.

A structure of geographical sections has been set up which will permit of growth and better service to our members. In 1947, we have added 578 members to our rolls—the last member admitted has been assigned number 2239.

All of our sections are not top-flight sections. Leadership in our sections varies greatly. Good leadership produces good sections. Good leadership gives good programs. The percentage of dues delinquency is an indication of this leadership—the good sections render such good service to their members that dues are paid promptly. Members feel that they are getting a return on their investment through educational and social values. The leadership required depends on the local Board of Directors and local officers. National SPE can not make outstanding sections—only intelligent leadership and hard work on the

(Continued on Page 10)

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PRESIDENT'S REPORT

(Continued from Page 9)

part of local members can create the ideal local section.

In 1947 all of our services have been improved at no extra cost to the members. It is our opinion that our present dues structure should be maintained. We believe that the present division of initiation fees and dues with the local sections should be maintained. This division provides strong local treasuries under the complete control of the Section Boards. The system makes for strong local sections.

Reviewing 1947, on March 1, 1947, the National Office was moved from Birmingham to Cleveland in accordance with policy laid down by the Council. The office work was in arrears. It was necessary to make personnel changes at the same time. In spite of these difficulties, our office work has progressed so that at present we are almost caught up with the work. The inexperience of the personnel has caused some errors to be made. We ask your indulgence and consideration.

Financially in 1947, expenditures have been reduced in line with the budget set up by the Council in January of 1947. There are no paid executives at headquarters. Two secretaries are now required to handle the work. Our financial condition as of January 19, 1948, is as follows:

Cash on Hand—Cleveland Account	$2,552.06
Cash on Hand—Detroit Account	1,135.37
	3,687.43
Accounts Payable	
Current Bills Payable but not due	373.80
Note due Chicago Section	1,500.00
Note due the Detroit Section	971.49
	$2,845.29

It is believed that the notes due the Chicago and Detroit Sections can be paid off in the near future.

In considering the SPE balance sheet, the strong financial position of our local sections should be considered. Many of our large sections have treasuries in excess of the National Treasury.

The SPE News has shown great progress during the past three months. The advertising revenue during this period has been somewhat greater than the cost. However, during the year the cost of providing the News has been substantial. It is worth, in our judgment, all that it costs.

A program was laid out for section sponsorship of the News. This program has been very well handled by the Toledo, Newark and Detroit Sections.

During 1947 three new National Committees have been added, a Speakers Committee, an Educational Committee, and a Historical Committee. Each of these Committees has done a real job for the Society.

During 1947 your officers met several times with the Trade Association—SPI—to develop a unified engineering program. A joint Committee was appointed to develop this program. A plan was unanimously recommended by this Joint Committee which SPI rejected. Nothing further has been done. The SPE policy is one of fullest cooperation with any group for the good of plastics. Your Advisory Board and your National Council believes the good of plastics can be best served by the independence and integrity of SPE.

In 1947, important By-Law changes have been made. The most important of these has been the change in the makeup of the National Council. As now made up this Council is composed of a National Director from each geographical section. This is considered to be a great improvement over the old Council in that each section is represented by a director who is elected solely by each section. The sections are responsible for their directors. Another change has been made in the composition of the Council whereby the retiring national president is made a member-at-large on the Council for a period of one year and placed on the Executive Committee during that period.

Certain recommendations are made as a result of 1947. These follow:

(1) While the Constitution of SPE is basically sound, nevertheless certain changes should be made. It is advised that the president appoint a committee to review and study these changes so that the Constitution can be changed at the next Annual Meeting.

(2) The main work of SPE is professional activities. 1948 should be a year in which much progress is made along this most important field of endeavor.

It is recommended that SPE develop end user specifications in all lines of industrial activity, similar to the work that has been done in the field of Business Machines.

It is recommended that the geographical sections be assigned special work along this line in the manner in which each section can serve.

(3) In the past three years the time element has worked to the disadvantage of the National Annual Technical Conference. The time and place of the 1949 National Annual Technical Conference should be selected at this time. Then plans can be made for a larger and more successful conference.

(4) A program should be laid out now so that section sponsorship of the SPE News for certain issues will be known immediately.

(5) 1947 has been a year of austerity for SPE. We believe this policy has been a good thing for SPE. The president should act as Executive Secretary in the future.

(6) A program of visitation should be laid out so that the national president is enabled to visit each section once during the year.

In closing I desire to extend my personal thanks to the members of the Detroit Committee who handled this show. You are familiar with their names and those of the various sub-committees. (2) The National Officers of SPE who have cooperated so well for the good of SPE (3) the Chairmen of the various National Committees (4) the Editor of the SPE, Mr. J. H. Day and his charming wife who have done so much for SPE with-

(Continued on Page 19)

COLOR STANDARDIZATION

(Continued from Page 1)

amount of light reflected or transmitted at each wavelength of light throughout the visible spectrum. This then, is a basic physical measurement of color. For example, Figure I is a spectrophotometric curve of a metal coated with a film containing ultramarine blue pigment. You will note from this figure that the blue pigment reflects 75% of the light in the blue region of the spectrum but absorbs all but 10% of the light in the red region of the spectrum. Figure II is a curve or graph of the quantitative manner in which a material coated with Red Lake C pigment reflects light. It will be observed from this curve that in the blue-green wavelength region of the spectrum, only 10% of the light is reflected, the rest being absorbed, and that in the red or long wavelength region of the spectrum nearly 90% of the light is reflected.

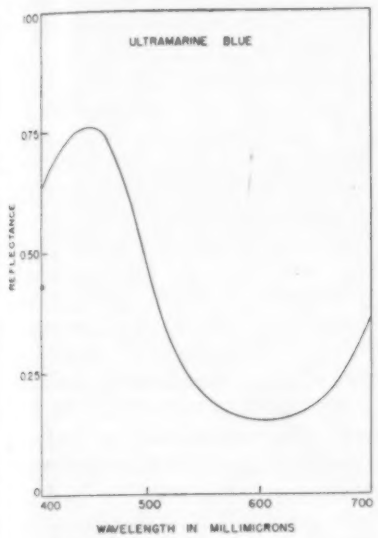


Fig. 1

Because these curves are fundamental physical measurements, they do not tell us, except in a general way, what the color looks like. But in many cases we may not be interested in the color as it is perceived and the curve may be sufficient.

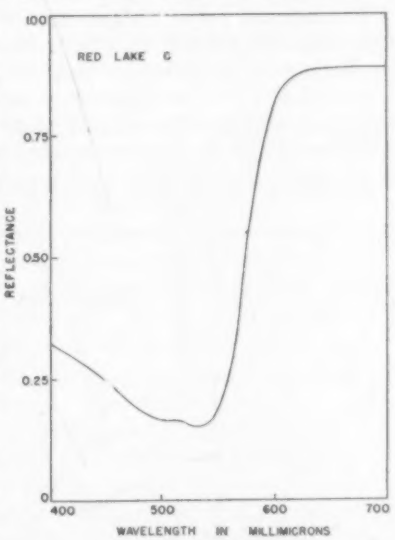


Fig. 2

In standardization or color control, a curve of this type is sufficient. We can follow through exactly how this curve is useful in helping to solve the problems of color standardization.

When a master standard is selected by the manufacturer, a curve is drawn. This affords a permanent record of the master standard. There is no longer the uncertainty of whether the master standard is fading and if it has definitely faded, there is no longer the problem of rematch-

(Continued on Page 12)

NORTH TEXAS SECTION

Meeting at the Dallas Athletic Club on Monday evening, January 5th, 1948, a large group of plastics engineers and executives formed the North Texas Section of the Society of Plastics Engineers, Inc.

The officers of the Section are as follows:

Chas. C. Convers, President.
Lou Barnett, Vice President
Harris Brim, Secretary.
E. H. Swazey, Treasurer.

The directors of the North Texas Section are as follows:

Chas. C. Convers, President, Panamerican Plastics, Dallas Texas.

Lou Barnett, Vice President, Loma Plastics, Inc., Fort Worth, Texas.

Harris Brim, Modern Plastics, Dallas, Texas.

E. H.. Swazey, Lone Star Plastics Co., Inc., Fort Worth, Texas.

Warner Van Hoople, Industrial Designer, Dallas, Texas.

Tom Harber, Celanese Corp., Dallas Texas.

H. A. Perry, General Manager, Perry Machinery Co., Dallas, Texas.

E. H. Sauers, Plastic Mfg. Co., Dallas, Texas.

F. B. Wilson, Modern Products, Inc., Fort Worth, Texas.

R. I. AND S. E. MASS. ELECTS

BY FREDERICK P. STEARNS

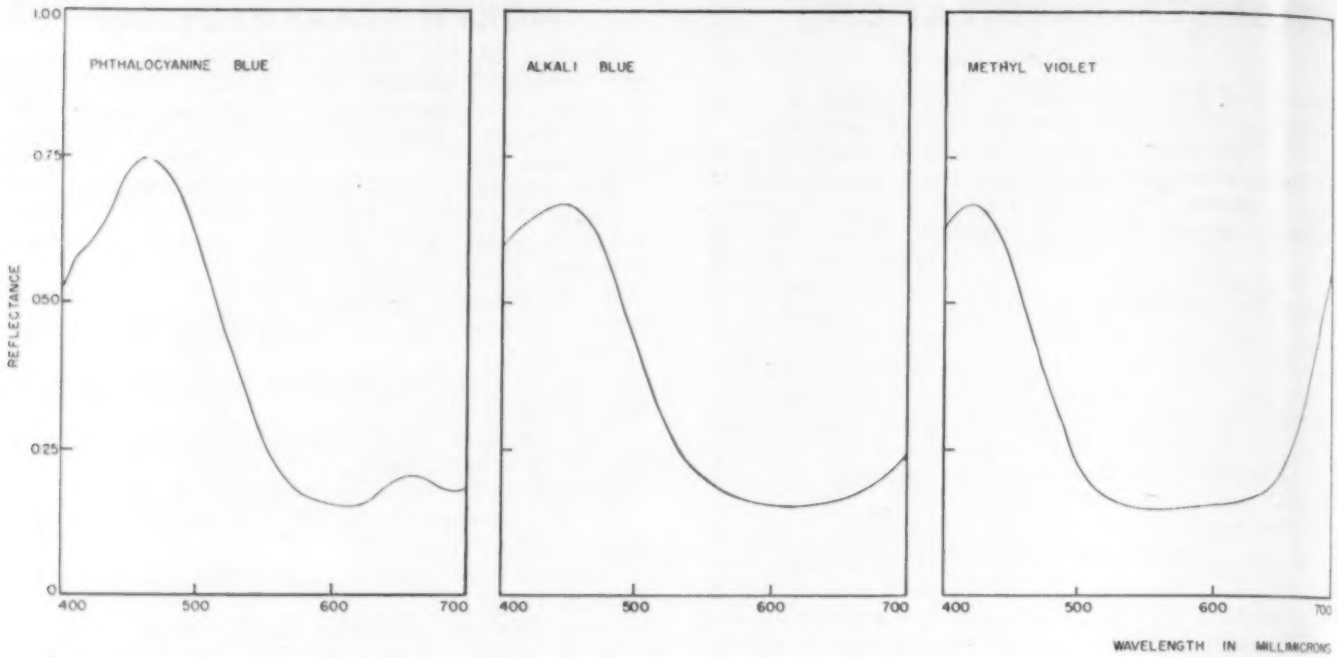
The January meeting of the Rhode Island and Southeastern Massachusetts Section of S.P.E. was held at the Providence Engineering Society Building in Providence, R. I., on Wednesday evening, January 14, 1948. Mr. John Steinberg, president, introduced Mr. John E. Alcott, of the Rhode Island School of Design, who spoke on the subject, "Product Development in Plastics."

Mr. Alcott, as chairman of the Division of Product Development at the Rhode Island School of Design, was well qualified to speak on the status and place of the industrial designer in the field of Plastics. He outlined courses of study recommended for the industrial designer and the type of education necessary for background material used in pursuing a career in industrial design. The 50 members and guests present were given an excellent account of the training required and principles involved in applying art in industrial design, particularly in the field of plastics.

Following the speaker, Mr. Steinberg announced the results of the election held during the past month. The new officers for the section are as follows:

A. H. Angell, Angell Electroforming Corp., President; R. L. Jacob, Cranston Molding Co., Treasurer; Arthur A. Richardson, Lloyd Products Co.; Vice-President; Anthony Turpak, Secretary.

Those elected to the Section Council for a three-year term were: Frederick V. Murphy, Standard Plastics Co.; Richard H. Bruce, Bakelite Corporation; Anthony Turpak. Mr. William Dunnican was elected Representative of the Section to the National Council.



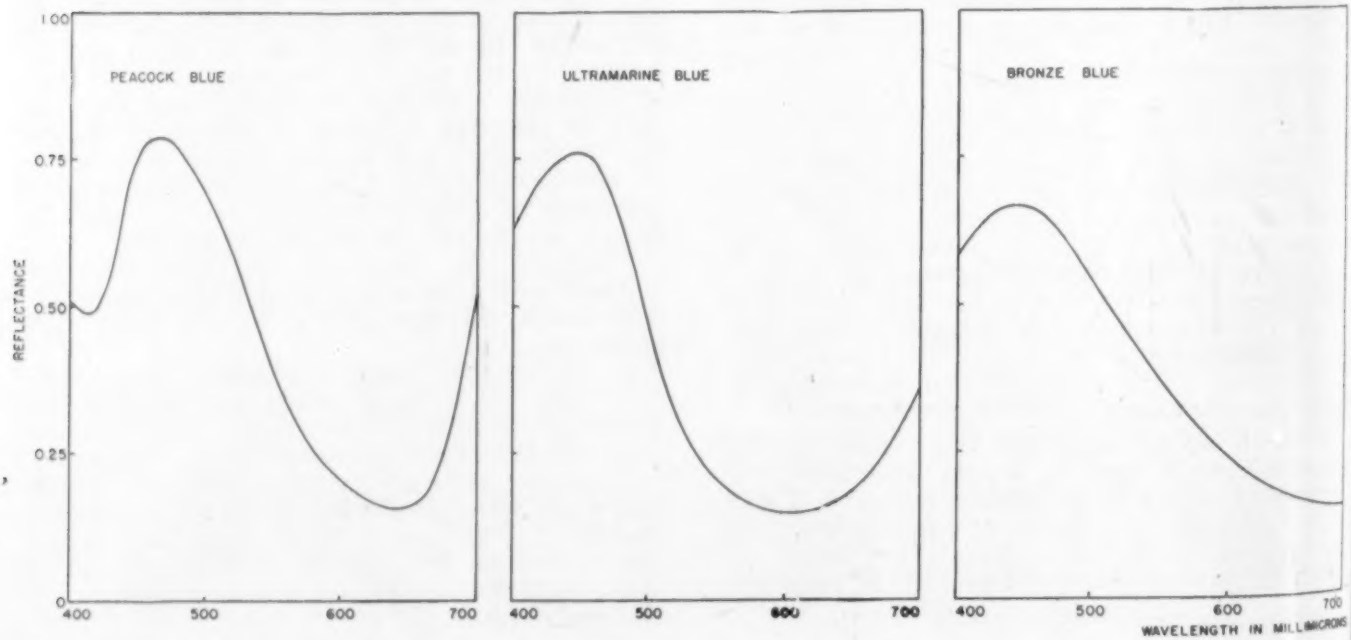
COLOR STANDARDIZATION

(Continued from Page 11)

ing this standard from color memory which is extremely poor. The spectrophotometric curve now becomes the master standard, and is not subject to change due to fading, handling, etc. A production standard or substandard is then selected from the first production run. It can be determined immediately if this substandard matches the master standard by a check of the two spectrophotometric curves. If the two curves are identical, the samples will match under all viewing and illuminating conditions. This substandard may then be used in the plant to check subsequent batches.

After a period of time, depending on the permanence of the material, the substandard may be checked spectrophotometrically. When a definite and objectionable change is observed in the substandard, it may be replaced by another substandard either from another production run, a laboratory sample, or a specially prepared standard. The validity of this standard may also be ascertained spectrophotometrically. It is important to point out here that each sample or even each run is not measured spectrophotometrically, because to obtain an even close spectrophotometric match in every instance would be introducing an exactness that would be overwhelmingly costly. The primary use is therefore to maintain rigidly the quality of the working standards used by the color matcher in the plant.

Another important application of the spectro-



photometric curve to color problems is based on the analytical information which may be obtained from the curve, thus allowing for the determination of the chemical composition of the colorant. Every material that is capable of selectively absorbing light, reflects and absorbs light in a manner particular to its own chemical composition. Figure III is a series of spectrophotometric curves of some of the common blue pigments. On a rapid examination of these curves, it is observed that they all exhibit a peak of maximum reflectance in the blue or short wavelength region of the spectrum and that they all exhibit an absorption in the red or long wavelength region of the spectrum. On closer examination, however, it will be observed that the curve for each blue pigment is characteristic for that pigment. For example, copper phthalocyanine blue is typified by the double absorption in the long wavelength region, 680 millimicrons, whereas, ultramarine blue is typified by the smooth, round absorption maxima, and the sharp rise in the near infrared. Peculiarities of curve shape for each pigment can thus be observed. It is from these shape differences that we are able to use the curves as an analytical tool. By compiling a reference library of curves of the pigments or dyestuffs commonly used in a field, as printing inks, plastics, or textiles, etc., a rapid identification of the pigment or dyestuff employed as the colorant can be obtained. Since it takes three minutes to run a curve on the General Electric recording spectrophotometer, it is admittedly a much more rapid method for identification than any chemical method.

Very often, it is possible thus to determine qualitatively the combination of pigments used in mixtures. However, it is not possible from one curve to determine, except in a general way, the quantities of these pigments. In mixtures where different pigments have very similar spectral characteristics, it is not possible to identify the pigment components by this method.

In specific control problems that entail mixtures of pigments, it is possible to set up gamut studies of known quantities, and by interpolation determine the amount of one constituent lacking in the case of a mismatch.

There is a wealth of other information that can be obtained from the spectrophotometric curve, itself, when the interpreter of the curve is familiar with the problems involved in his specific industry. There are many times, however, when it is desirable to know what the color looks like when perceived by the eye and integrated in the brain.

It will be remembered that the curve is a basic physical measurement and as such does not include the human sensation of color. When one describes a color, one cannot specify the amount of light reflected at each wavelength since the eye is an integrating instrument not an analyzing instrument. Some time ago, a color was described, for example, as a "lightish, pinkish, purple that is not too clean but not too dirty." Obviously, with the present requirmeents for speed and accuracy in modern production, this type of color language could not persist. A precise, universally communicable color language was essential.

In 1931, a commission met in Paris to establish a method for translating spectrophotometric data into a notation which would include the psychological sensation of color and would make possible an orderly method of specifying color.

It was known by this commission, the International Commission on Illumination (ICI), that color was often described by showing an actual sample of the color or by showing another color swatch that was similar to the described color. This procedure may be described as "duplicating a color by an equivalent co'or stimulus." It was also known by the ICI that any color stimulus could be duplicated by mixing three primary lights in the proper ratios. These three lights include a specially chosen red, green and blue light and are called the primary stimuli.

The ICI utilized this information in adopting the procedure of having many normal observers match each 10 millimicron wavelength interval of the spectrum by mixing the primary stimuli in measured ratios. The amounts of the red light, green light, and blue light, which the ICI standard observer, an imaginary observer obtained from averages, required to match each spectrum color, were recorded and called the tristimulus

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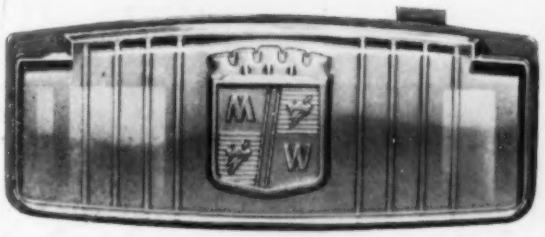

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COLOR STANDARDIZATION

(Continued from Page 13)

values of that spectrum color. These values are designated as X, the amount of red light, Y, the amount of green light and Z, the amount of blue light. We now have tristimulus values for each spectrum color and by plotting the wavelength of the spectrum color versus the relative amount of each tristimulus value, a graphical representation is obtained. This graph is shown in Figure IV.

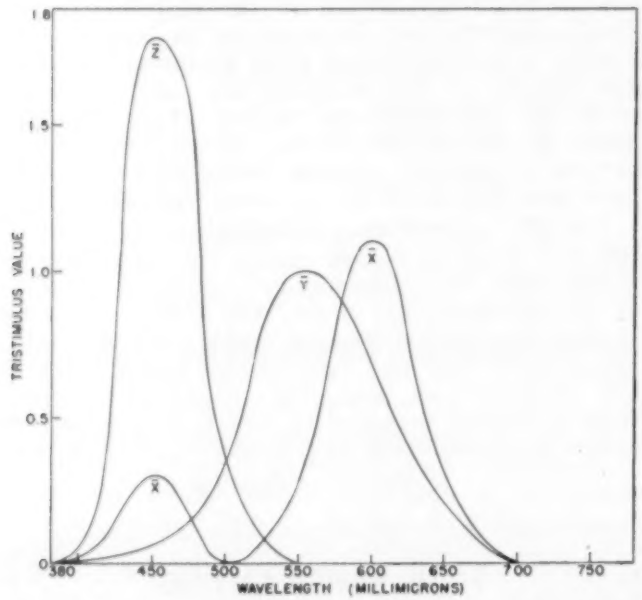

Fig. 4

In addition to the physical manner in which light is reflected from any colored object, we must also consider that the illuminant light under which it is viewed is another important factor in the way it is perceived. For a moment we will have to go back to the physical phenomena of light. It is generally known that daylight is much bluer than tungsten light. This is actually shown in the spectral distribution curves of these two sources. (Figure V).

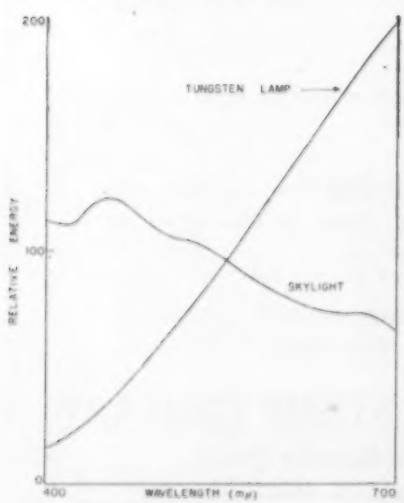

Fig. 5

It will be observed that the skylight or daylight emits a great deal more blue light than red light and it will also be observed that the tungsten light does just the reverse.

Going back to Figure II, if we look at the curve of the ultramarine blue, we will note that blue reflects 30% of light at the wavelength of 680 millimicrons and 10% at 600 millimicrons. Now, if this blue were viewed under daylight or skylight, that sudden rise in the reflectance in the longer wavelength region (680 millimicrons) would be compensated for by the drop in relative energy of the illuminant in this region, but if viewed under tungsten light this sudden rise in reflectance would be exaggerated by the increase of relative energy of the tungsten illuminant in this region. In the case of the daylight illuminant, the increase in red reflectance of the pigment would be minimized and the color would appear quite blue, but in the case of the tungsten illuminant the increase in red reflectance would be enhanced and the color would appear purplish or reddish. This phenomenon explains why colors look different under different illuminants and why color matches appear good under one illuminant and extremely bad under another. The statement as made earlier that only when two colors match spectrophotometrically will they match under all conditions of illumination, is thus explained. It is therefore apparent that the illuminant under which a color is viewed is another important factor in determining how the color will appear.

Thus, in any notation of color that embodies perception, the illuminant must be considered. For this reason tristimulus values of each common illuminant was obtained by the ICI procedure.

Any spectrum color or any common illuminant may now be notated by three numbers. Since three numbers indicate a three dimensional, and therefore undesirable, graph, by simply placing the X, Y, and Z values on a unity basis, we arrive at three percentages. These percentages or fractions of "one" are called the trichromatic coefficients and are notated as x, y and z. With the percentage system we can deal with only x and y, and z will always be known by subtraction. Hence we may use a two dimensional graph.

Once the trichromatic coefficients for the spectrum colors were obtained and the theory behind them examined, it became obvious that a mathematical translation of any spectrophotometric curve to tristimulus values could be obtained. This is accomplished by multiplying the reflectance curve of the material by the spectral energy distribution curve of the illuminant under which the material was viewed and then multiplying this product curve by each of the curves in Figure V. For better understanding, those curves in Figure V may be considered the eye sensitivity of the standard observer to the primary stimuli in a color. A computation of the area under this final curve will result in the tristimulus values of the material for which the curve was drawn.

The equations for obtaining the tristimulus values of any colored material are:

The value of X is equal to the integral, with respect to lambda, from zero to infinity, of E (illuminant) times R times X bar, where the symbols have the meanings given above. The values of Y and Z are calculated the same way.

This is now a method of specifying color. But these tristimulus values and trichromatic coefficients afford very little more in the way of communicating the color as it is perceived. Therefore, a color map was made, which is shown in Figure VI, and is a graph of the trichromatic coefficients of the spectrum colors plotted x versus y.

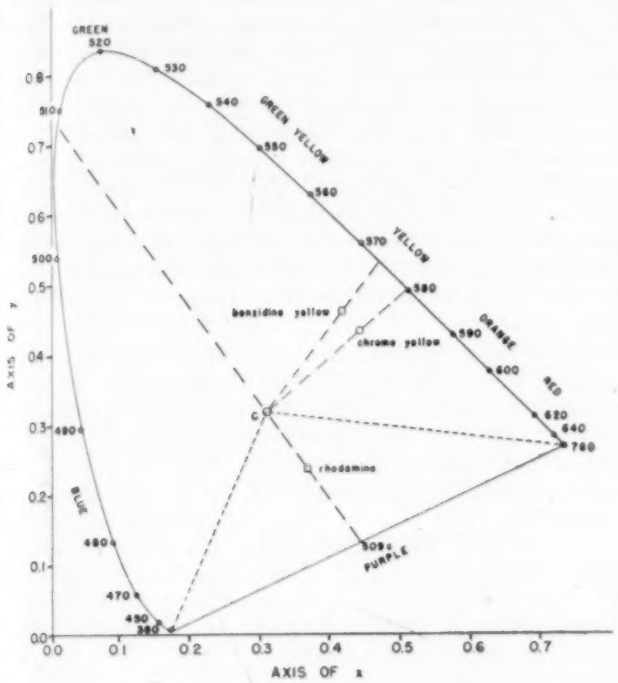

Fig. 6

By drawing a smooth line through the points of each spectrum color, at each wavelength interval, a spectrum locus is obtained. On this map is also plotted the trichromatic coefficients of the illuminant with which we are concerned. In this case, it is daylight or illuminant C. Dotted lines are drawn from the beginning of the spectrum locus to the illuminant point and from the end of the spectrum locus to the illuminant point, and a straight line is drawn from the first point across to the last point.

Since purples are not true spectrum colors, there is no place on the spectrum locus which would include these colors. This artificial line from the first to the last point is, therefore, reserved for them and their manner of notation will be discussed later.

With this color map, any desired color may be charted by plotting the trichromatic coefficients of the color in question, and subsequently notated in a manner which will quantitatively impart the sensation that the color arouses.

For example, if a benzidine yellow and chrome yellow are spectrophotometrically measured, trichromatic coefficients obtained for each, and then these values plotted on the color map, we can immediately see, as in Figure VI, that by drawing a straight line from the illuminant point, through the color point, to the spectrum locus which spectrum color dominates in the benzidine yellow and which in the chrome yellow. We will observe that the benzidine yellow is extended to the 573.9 point on the locus and the chrome yellow to the 579.9 point. Since we know that the longer wavelengths are orange and red, we can assume that this chrome yellow is redder than the benzidine yellow.

We have now charted the dominant wavelength of two colors that fall within the scope of the spectrum. But what of colors, such as purples, that are not true spectrum colors? These artificial colors will plot between the two dotted lines on the color map as shown in Figure VI. A straight line is drawn from the illuminant point, through the color point and out to the artificial spectrum locus, as in the instance of the two yellows. But departing from the usual procedure, the line is extended back through the illuminant point and out to the true spectrum locus. The rhodamine pigment, whose trichromatic coefficients are plotted in Figure VI, is then notated as having a dominant wavelength of 509 complementary.

But this accounts for only one aspect of color, and we know that color can differ in three ways, namely, hue, purity, and lightness or darkness.

Considering the next aspect of color, purity, it will be assumed that if a color is completely achromatic, such as white or neutral gray, it will

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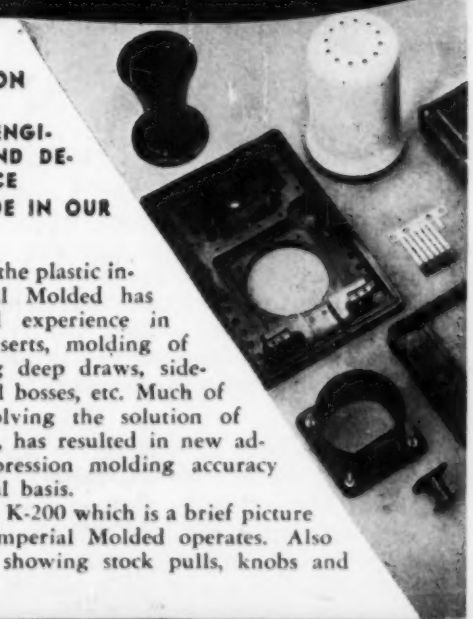

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COLOR STANDARDIZATION

(Continued from Page 15)

reflect the light just as the light is incident upon it and, therefore, assume the trichromatic coefficients of the illuminant under which it is viewed. On the other hand, the more chromatic a color the closer it will resemble a spectrum color. It can now be concluded that the closer the color plots to the spectrum locus, the cleaner it is or the greater is its purity. In the case of the benzidine yellow, the point plots closer to the spectrum locus than to the illuminant point. To be exact, it plots 67.5% closer. This then is the purity value of the color. The chrome yellow is slightly lower in purity than the benzidine yellow, and plots 66.5% closer to the spectrum locus than to the illuminant point.

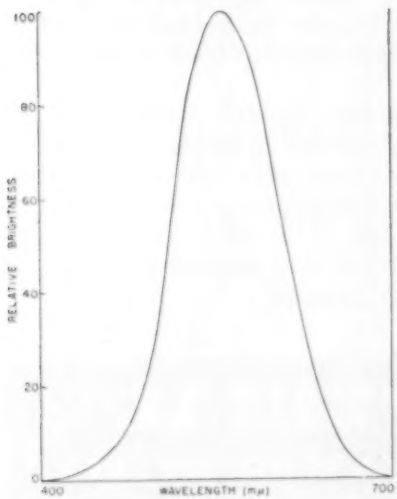

Fig. 7

The last aspect of color, namely lightness or darkness, or, as termed in the ICI system, luminous reflectance, is still to be considered. If a spectrum, in which each wavelength of light is of equal intensity, were viewed by the ICI standard observer, this hypothetical person would find that the violet and blue end of the spectrum seems less intense and that the green or middle of the spectrum appears the brightest, and again the red end of the spectrum seems less intense. The actual graphical representation is shown in Figure VII. To simplify calculations, the ICI made the primary stimulus Y exactly the same as this equal energy luminosity curve. From Y, the luminous reflectance is directly obtained.

With these three notations, we now have a way to communicate a color so that anyone can understand exactly what is meant. We can quantitatively specify the dominant wavelength and know if it is a blue, green, yellow, etc.; the purity and know if it is clean or close to achromatic; and the luminous reflectance, and know if it is light or dark.

Once a method of absolutely specifying color is available, we can set tolerances for production matches. For example, it would be too much to expect that every product off the line would or could be a spectrophotometric match. But we could say that in order for a match to be acceptable it should have certain limits of its x, y and Y values. This, then, would allow for a circle around the standard point on the color map and would take into consideration that a color can vary a certain amount in dominant wavelength, or purity or luminous reflectance, or some tolerable combination of variations of two or even three aspects of color. The radius of this circle would depend entirely on the tolerance limits. In the case of the dresses the circle would be small, but in the case of the cartons it would be larger. In recent studies, it has been observed that visual acceptances of small tolerances are not, unfortunately, grouped circularly around the standard point. From these studies, equations utilizing the tristimulus values have been devised which afford data that more nearly specify what the visual acceptance will be. Further work on this subject has also yielded equations so that tolerances need no longer be determined by visual guesses. These equations, also utilizing the tristimulus values, will allow us to determine how many just noticeable differences there are between two colors. Because of the complexity of these equations, they cannot be considered in the scope of this discussion.

From these notations on the spectrophotometric curves, it is also possible to obtain color matches without ever having seen the color to be matched, or without having to preserve a perishable standard while making the match. It is true that the most desirable match would be a spectrophotometric one, but this is often impossible due to the nature of the colorants in the standard as in the case of natural foliage. Once the match is obtained it is also possible by computation to determine how great a change will occur in the match when the illuminant is changed.

To summarize:

Master standards, because of their fugitive nature are not as desirable as a spectrophotometric master standard which is a permanent record of the standard as originally accepted.

The fading or changing of substandards may be checked spectrophotometrically periodically and their point of uselessness determined. When the substandard is discarded, spectrophotometric curves allow for an exact duplication of a new substandard.

The spectrophotometric curve may also be used as an extremely rapid analytical tool in identifying the colorant components of a colored object.

A universal color language, which allows the communications of a desired color, has been developed from the spectrophotometric curve and is known as the ICI system of color notation.

From these notations, color tolerances may be specified so that permissible changes in dominant wavelength, purity and luminous reflectance may be allowed.

From both spectrophotometric curves and ICI notations, it is possible to make color matches, either spectrophotometric or visual, without using an actual standard. As in the case of visual matches, it is possible to determine how the match will differ due to a change in illuminants.

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CHICAGO HEARS SASSO ON FUTURE OF PLASTICS

BY VAL WRIGHT

John Sasso, Production Editor of Business Week, was guest speaker at the February meeting of the Chicago section, held on February 3 at the Merchants and Manufacturers Club. Mr. Sasso, speaking on, "What's Ahead for Plastics in 1948," declared that the plastics industry has now come of age and called for "an end to skylarks with doubtful applications." He advocated more intensive education, both within the industry and along consumer lines, to increase public knowledge of plastics and help to build favorable consumer acceptance for plastic articles.

"The ultimate consumer must be helped," said Mr. Sasso, "because he is the one that pays the freight eventually." He advocated aggressive selling and promotion on sound principles, more attention to labelling of plastics products, development of new types of applications, including combinations of plastic and other materials, and more efficient operations to cope with the high break-even point with which many manufacturers are faced today.

William L. Hess, Anesite Co., newly elected president of the Chicago section, took over his duties at the February meeting. An overflow attendance was recorded at the meeting, which because of another meeting in the main dining room was switched over to a smaller room at the club.

Personals

Ed Ackerman, Newark Section, has joined the Hercules Powder Co. This very active member was formerly with Chemaco Corp.

Kurz-Kasch, Inc., pioneer plastic moulders in Dayton, Ohio, announce the formation of a new sales territory comprising Western New York State, Western Pennsylvania, and Northeastern Ohio.

Mr. Charles F. Hamilton has been appointed District Sales Manager with operations headquarters located in the News-Herald Bldg., Franklin, Pa.

Mr. Hamilton, one of the founders of the Society of Plastics Engineers, (S. P. E.) was in charge of the Kurz-Kasch sales office in the Detroit area from 1938 to 1945.

NEWARK ELECTS OFFICERS; HAS THERMOPLASTIC FORUM

BY E. B. SOULES

The regular meeting of Newark Section was held on January 14 at the Newark Athletic Club as usual. The evening was designated as "Thermo-Plastic Evening," at which time some of our local molding problems were presented for general discussion. This program was so well received and approved by all who attended that it has been decided to continue these discussions at future meetings.

The result of the Newark voting elected the following directors for new terms:

Dr. R. B. Akin of DuPont, three-year term. Gilbert L. Peakes of Bakelite, three-year term. Edward B. Soules of Detroit Molding Engineering Co., three-year term. Dr. T. Smith Taylor of U. S. Testing Co., two-year term. Joseph L. Bonanno of Lionel Corp., one-year term.

The following officers were elected for the year 1948:

James T. Growley of Celanese Corp., President; Harold E. Frutchey of Thomas Mfg. Corp., Vice-President; Edward B. Soules of Detroit Mold Engineering Co., Secretary-Treasurer.

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CONFERENCE NOTES

(Continued from Page 2)

SPE News throughout the coming months. The paper by Miss Dolton appears in this issue. Abstracts of all the papers will appear in the March issue.

A pleasant innovation was the official presence of two attractive young ladies, Miss Dorothy Dolton of the Interchemical Corporation, who presented a paper on colorimetry, and Mrs. Jesse H. Day, who attended on behalf of the SPE News.

The identification badges used during the Conference were molded, and donated, by L. H. Amrine, Chicago Section member, president of Imperial Molded Products.

A disappointment was that not sufficient time had been allowed for the judging of the National Prize Paper Contest, so that these were not presented. When judging is complete, the SPE News will print the winning papers, and tell something about the authors.

Look for the announcement next month of the 1948 Prize Paper Contest. This year there will be no restriction as to age, or as to SPE membership. The primary objective of the contest is to provide through the medium of the SPE the very finest of original contributions to the plastics industry. You'll have to wait for the March issue of the SPE News to read the formal announcement of the rules for the Prize Paper Contest; but you don't have to wait to get started writing your entry. The prime consideration is that the paper shall contribute original thought to some phase of the plastics business; chemistry, molding, materials, machine design, selling, end-uses, etc.

Companies Participating

Acrilex Sales Corp., 150 E. 35th St., New York 16, N. Y.
American Plastics Engineering Co., 3020 E. Grand Blvd., Detroit 2, Michigan.
Shaw Insulator Company, Irvington, N. J.
Bee Chemical Co., 62 E. Lake St., Chicago, Ill.
Cadillac Stamp Co., 2136-38 Riopelle St., Detroit, Michigan.
Cleworth Publishing Co., 551 Fifth Ave., New York 17, N. Y.
Detroit Macoid Corporation, 12340 Cloverdale, Detroit, Mich.
Durez Plastics & Chemicals, Inc., North Tonawanda, N. Y.
Charles H. Frantz, 15340 Lindsay Ave., Detroit 27, Mich.
Hercules Powder Co., 924 Market St., Wilmington 9, Delaware.
Hydraulic Press Mfg. Co., Mt. Gilead, Ohio.
Elmer Maywald Co., Inc., 189 W. Madison St., Chicago, Ill.
Miskella Infra-Red Co., E. 73rd and Grand Ave., Cleveland 4, Ohio.
Modern Plastics, Inc., 122 E. 42nd St., New York 17, N. Y.
Monsanto Chemical Co., Springfield 2, Mass.
National Rubber Machinery Co., 47 W. Exchange St., Akron 8, Ohio.
Plastic Engineering Co., 8506 Lake Avenue, Cleveland, Ohio.
Process Mold & Mfg. Co., 6455 E. Lafayette, Detroit 7, Michigan.
Reichhold Chemical Co., 601 Woodward Heights, Ferndale, Michigan.
Seal-Peal, Inc., Hammond Bldg., Detroit, Mich.
Standard Products Co., 19255 W. Davidson Ave., Detroit, Michigan.
Wolverine Plastics, Inc., Milan, Michigan.
Ziff-Davis Publishing Co., 185 N. Wabash Avenue, Chicago 1, Ill.

1948 OFFICERS N. Y. Chapter SPE

President, Arthur Nufer, Bakelite Corporation, 30 East 42nd St., New York City; Vice-President, Stanley Bindman, Noma Electric Corp., 55 West 13th St., New York City; Secretary, Samuel Silberhause; Treasurer, George Rice, American Cyanamid Co., 30 Rockefeller Plaza, New York City.

CLEVELAND OFFICERS

The Cleveland Section Directors met January 12, 1948, and balloted for new section officers. The following men were chosen, all by unanimous vote: President, William Johnson; vice president, Hugh Winn; secretary, M. S. Moulton; treasurer, C. F. Saurwein.

Mr. Johnson appointed an Auditing Committee, composed of: D. H. Sanders, R. J. Goulder, and C. F. Waterfield. Mr. Waterfield was named chairman of the House Committee.

James Newhouse, Plastic Engineering, Inc., was passed for Associate Membership.

ST. LOUIS TO SPONSOR IN APRIL

BY C. TODD CLARK

The February meeting of the Saint Louis Section will be held at the Melbourne Hotel, Tuesday evening, February 24th, 6:30 p. m.

An earnest effort to increase real engineering interest is being offered by the showing of a movie on the Rockford Hy-Jector Molding Machine in conjunction with the topic of our program, "Users' Disussion on Plastics in Their Products." The speakers will be Saint Louis S.P.E. members: Messrs. Floyd Green, Engineer, Frank Adams Electric Co.; Otto Wulfert, Mechanical Engineer, Wagner Electric Co.; D. E. Rutishauser, Chief Engineer, Hussmann Refrigerator Corp. Plastics component parts used, or to be used, will be shown and discussed in open forum.

The Saint Louis Section has scheduled all of the 1948 meetings to be held on the last Tuesday evening in each month at the Melbourne Hotel. Both banquet and smoker meetings are to be held and our Program Committee will endeavor to obtain engineers from outstanding industries using plastics in consumer or industrial products.

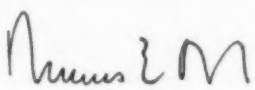
We are making a concerted effort to make the April issue of The News a success.

PRESIDENT'S REPORT

(Continued from Page 10)

out compensation (5) the officers of the Geographical Sections (6) the Members of the Membership Committee around the U. S. A. who have cooperated so fully personally (7) the individual members of SPE all over the world who have been called upon to cooperate in organizational activities and who have never failed.

SPE is on firm ground for future expansion. If we preserve our democratic base and independence free from any outside influence, SPE will become the force for greatest good in the field of Plastics.



MISSING LETTERS

(Continued from Page 3)

us there is no difference; they are both vinyl chloride—vinylidene copolymer resins. No wonder the poor engineer is confused and specifies aluminum.

What the plastics industry needs is a method of specifying materials which is so simple that any designer or engineer can convey the qualities required to the molder or fabricator in understandable terms.

Look what the steel industry did. They use four little numbers prefixed with "SAE" and everyone is happy. In 1946 the steel industry produced a little over sixty-five million tons of steel! And how many tons of plastics were used? Why, I'll bet that no less than a thousand tons of steel were specified in 1946 alone by draftsmen who had never heard of any metal except SAE 1020.

Everybody who reads the Sunday papers knows that plastics is the ideal material for automobile bodies because it doesn't chip, peel, rust or dent, the color goes all the way through, and it is pleasant to the touch, but we will never see so much as a plastic fender as long as the designer has to use the present system of material specification.

It would never make sense anyway without those three missing letters.

N. W. PENN.

(Continued from Page 8)

The 1948 directors of the Northwestern Pennsylvania Section held the annual election of officers on January 3, 1948, at the Press Club., Erie. The following were present at the meeting: E. H. Roberts, P. C. Roche, L. F. Moore, N. R. Reyburn, J. C. Stokes, and W. R. Byrd. Mr. N. R. Reyburn was elected president; E. H. Roberts, vice-president; J. A. Loranger, secretary; P. C. Roche, treasurer.

In the election of directors, J. A. Loranger and C. W. Kuffner received a tied number of votes. In order to fill the unexpired term of Director K. Rouzer, C. W. Kuffner was elected by a majority vote of those present. J. A. Loranger became director for three years. Mr. Kuffner to serve one year of the unexpired term.

N. R. Reyburn, Second from Left; P. C. Roche, Extreme Right

The next business which came before the meeting was memership in the Erie Engineering Council now being formed. The summary of the purpose of the council was read and by a voice vote the directors voted to support the group and selected Paul Roche to represent the S. P. E. until a regular representative could be properly chosen. A fee of $15.00 per year membership was authorized. Advisory board and committee are to be set up at an early date .

GRAF AT PHILADELPHIA

By John C. Graf

The Philadelphia Chapter of the Society of Plastics Engineers held its regular monthly meeting on Thursday evening, December 16th, at the Franklin Institute in Philadelphia.

As usual, the meeting was preceded by a dinner tendered to the speaker, held in the Dairy Dell of the Franklin Institute.

The speaker of the evening was Mr. John C. Graf of the John C. Graf Company of Philadelphia, who gave a talk emphasizing the important part hydraulic presses play in the production of products for peace and war time needs.

This was followed by lantern slides illustrating presses made as far back as 1900 and various types of products were on display showing articles made on hydraulic presses.

After the talk, a film was shown, "Watts in Glass", furnished through the courtesy of the Owens-Corning Fiberglass Corporation, after which followed a discussion and questions were answered by Mr. John H. Clark of the Owens Illinois Glass Company.

Our last meeting was held on Thursday, January 15th at the Franklin Institute, at which time there was a joint meeting of the SPE and the SPI. This meeting featured "ladies' night," and was preceded by the usual dinner.

The subject was, "Preview of Progress", showing chemical advances through research, by L. F. Livingston, Manager, Extension Division of the E. I. DuPont de Nemours and Company.

GEROW IS PRODUCT MANAGER

Milo R. Gerow has been appointed Product Manager of the Plastics Division of Reynolds Metals Company, according to an announcement made recently by J. Louis Reynolds, Vice President, and will be in charge of Plastic Film Sales, Development and Production. His headquarters will be the New York offices of Reynolds Metals Company at 19 East 47th Street.

M. R. Gerow

"Mike" Gerow is well known throughout the plastics industry as an authority on cellulosics. As President and Director of the S. P. E. Newark Section he has played an important part in making the Newark Section one of the largest and most active sections in the Society. Mr. Gerow was formerly New York Technical Sales Representative for the Cellulose Products Department of Hercules Powder Company of Wilmington, Delaware.

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BUFFALO PLANS FUTURE

Work Begun for September Sponsorship of the SPE News

By J. C. CASSIDY, JR.

The newly-elected Board of Directors of Buffalo met on Monday evening, November 29. This group now includes:

Edward F. Borro, one year; John E. Miner, one year; James V. Cox, one year; George J. Goepfert, two years; Haiman S. Nathan, two years. Newly elected: J. Clarke Cassidy, Jr., two years; Earl A. Russell, three years; Alex N. Di Addario, three years; Richard R. Van Geem, three years.

First in the order of business was the election of officers for 1948. They are: President, John E. Miner; vice-president, George J. Goepfert; secretary, J. Clarke Cassidy, Jr.; treasurer, Haiman S. Nathan. President Miner has not yet completed his selection of committee chairmen. He will announce their names at the next regular meeting.

Other topics discussed at this Directors' meeting included: possible program arrangements which would interest a larger percentage of the diversified Buffalo membership than heretofore; plans for the September issue of "SPE News" which is to be sponsored jointly by the Buffalo and Northwest Pennsylvania Sections; methods of securing advantageous publicity for the local plastics industry.

The January meeting was on January 30 at the Hotel Westbrook, Buffalo. This change was necessitated in order to secure the excellent program which Hi Nathan had arranged. Our speaker was Mr. James V. Veverit, well-known Buffalo industrial designer who specializes in the design of plastic products. Mr. Veverit has been highly recommended both as a designer and as a speaker by a number of Buffalo Section members for whom he has done design work. Anyone who is even remotely connected with the marketing of manufactured commodities finds Mr. Veverit's talk most interesting.

Also on the program was a full-color movie produced by Owens-Corning Fiberglas Corporation entitled, "Watts in Glass." Everyone who designs, manufactures, or uses and maintains electrical equipment or who is interested in the field of electrical installation should see this interesting, informative, and educational picture.

There was also conducted at this meeting a short question and answer period during which the members of the Society functioned as their own Board of Experts. Any questions asked which could not be competently answered by members present, arrangements were made at the next meeting to have a member present who has the necessary information. Two additional features of the January meeting were short addresses by Mr. George F. Brown and Mr. Henry Bryzinski. (This was news to them, too.) Since Geroge and Hank head the alphabetical list of members, they were called upon to give informal two-minute thumbnail sketches entitled, "My Job in the Plastics Industry."

BIKLEN WINS AT NEWARK

The annual Prize Paper Contest of the Newark Section, Society of Plastics Engineers, Inc., was won by Donald W. Biklen, 115 Rynda Road, South Orange, New Jersey. Mr. Biklen is a Product Engineer for Shaw Insulator Company of Irvington, New Jersey. During the war, Mr. Biklen was in the plastics section at Picatinney Arsenal.

Donald W. Biklen

In his paper "Styling Molded Plastic s—Fundamentals, Applications and Benefits," Mr. Biklen presents in a simplified manner the basic principles of design with illustrations of each principle. Poor design as well as good design are examplified and reasons are given why a poorly designed plastic part could have been a well designed part at no extra tooling cost.

Reasons are also given why a well designed part can be advantageous to the manufacturer as well as the molder.

OFFICERS FOR E. NEW ENGLAND

By E. V. Painter

The Eastern New England Section of the Society had a dinner meeting last January 15. The speaker was Mr. Ira W. Hutchison, who gave a very interesting talk on "Silicones of Interest to the Plastics Industry." Questions and answers continued for some time after the talk.

The group was not as large as usual because of the unusually bad weather and poor travelling conditions.

An election of new officers was held amongst the members of the new Board which had been elected by letter ballot. They are as follows:

Jack Queeny, President.
George K. McLean, Vice-President.
George E. Pickering, Secretary.
R. Witt Hubbs, Treasurer.
Paul D. Zottu, National Council.
A. G. Dietz, Section Council.
Frank A. Rideout, Board Member.
E. B. Roberts, Board Member.
George B. Makepeace, Board Member.

Appointment of new committees will be made sometime during the next month.

CLEMENT AT ROCHESTER

There was a short business meeting after dinner at which time the membership drive was discussed. At the present time the local chapter has 47 members and associates. Advance programs were discussed by Mr. Cathcart, Program Chairman. Everybody seemed satisfied that he was getting programs of itnerest to everyone.

After the business meeting, the chapter had the opportunity of hearing Mr. Theodore G. Clement, who is in charge of the Styling Division of Eastman Kodak Company, speak on the subject, "Principles of Industrial Design as Applied to Plastics," The talk was illustrated with colored slides and proved interesting.

A discussion was held after the talk on various problems brought to mind by the slides. This also proved interesting.

Immediately after the meeting, Vernon Howe, George A. Peck, and Herbert Capron left for Detroit to attend the meeting of the national association.

CENTRAL OHIO

By R. A. Clark

The January meeting of the Central Ohio Section of the Society of Plastics Engineers was held on Thursday, January 8, at the Wagner House, Newark, Ohio, with 54 members and guests attending. A cocktail hour, prior to the dinner, was sponsored by Newark Plastics, Inc., and the Plastics Design and Sales Company. Mr. M. W. Burkhart, Chairman of the House Committee, made the arrangements for the dinner.

Personals

Kenneth A. Rouzer, 1947 Vice-President of the Northwestern Pennsylvania Section, has just taken up a new connection with Amos Molded Plastics in Edinburgh, Vienna, having previously been connected with Acorn Plastics Engineers, Inc., of Erie, Pennsylvania, as Vice-President. "Kenny" has long been an exponent of expediting business matters by the use of his personal airplane.

Mr. M. A. Nichols resigned from the Process Mold & Mfg. Co. on January 1st to enter the manufacturing field for himself. His firm, the Manco Products Co., has purchased a plant located at 2401-2409 Schaefer Road, Melvindale, Michigan, and will begin operation in the fabrication of beryllium copper cavities for plastic molds on or about March 15th. The Detroit office is 5-154 General Motors Bldg., Detroit, Mich.

Nathaniel R. Reyburn should find that his new post as president of Northwestern Pennsylvania Section should fill out his schedule. During 1947, when he acted as secretary of the section, he met the housing shortage by building a new wing on his residence himself. He is Chief Engineer of Applied Plastics Division, Keystone Brass Works, Erie, Pennsylvania, and is an active Power Squadron and skiing enthusiast. Just before the turn of the year Nat added No. 3 to the younger generation of Reyburns.

Paul C. Roche, National Director from the Northwestern Pennsylvania Section, has just been elected Vice-President and Business Manager of the Choristers of the Uthmann Chor, Erie, Pennsylvania. This organization is affiliated with the Associated Male Choruses of America, is composed of 40 male voices, and gives quite a number of concerts each season over the Eastern area of the United States.

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